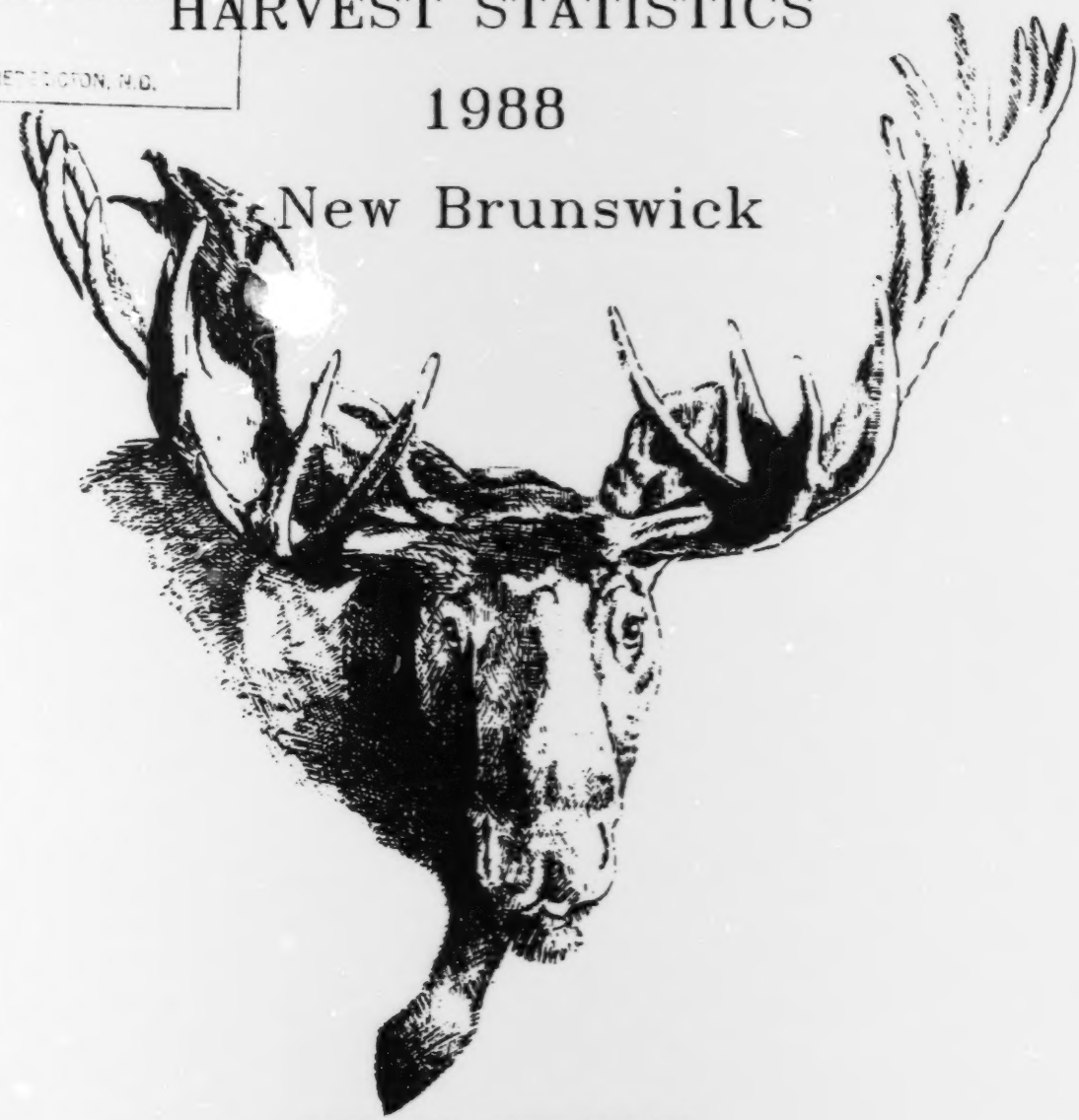
JUN 1 5 1989
FREDERICTON, N.B.

MOOSE
HARVEST STATISTICS
1988
New Brunswick



GERALD REDMOND
FISH AND WILDLIFE BRANCH
DEPT. OF NATURAL RESOURCES AND ENERGY
BOX 6000, FREDERICTON, N.B.
E3B 5H1

SUMMARY

90-00665/

During 1988, a total of 35,890 New Brunswick residents applied for a moose hunting license. This represents a 5% decline in applications from the previous year. Only those residents who did not hold a moose license during the previous 5 years were eligible to apply. Six thousand permits were randomly selected from the pool of applicants and 5,185 licenses were issued for the 1988 moose hunt.

1988 was the 15th consecutive year that New Brunswick had a 3-day moose season. Licensed hunters were eligible to harvest one moose of either sex and any age.

The 1988 moose season occurred:

September 22, 23, 24
(Residents-only were eligible)
License Fee: $25.00

A total of 1,473 moose were legally harvested in 1988 which represents a 28% hunter success rate. Hunter success during 1987 was 35%. The average hunting effort required to harvest one moose was 15.1 hrs. during 1988. Successful hunters averaged 6.9 hours per day whereas unsuccessful moose hunters spent an average of 8.6 hours hunting each day. This represents approximately 126,000 hours of moose hunting recreation.

Of the 3,712 non-successful moose hunters, 56% returned their hunter report forms at the end of season.

During the 1988 moose season, the Lakestream Moose study Area (Zone C) was closed to hunting. This was estimated to have displaced approximately 240 hunters and would account for a decline in harvest of about 60 animals. The Lakestream Zone will remain closed for the next 4 years while we examine the impact of hunting on the population dynamics of the moose herd in this area. A winter aerial population census was completed in March 1989 and the zone will be periodically censused during the closure period. The intent is to use the Lakestream Study Area as a long-term field laboratory to test other management techniques such as selective harvest, designated hunting routes, limited access, etc. We appreciate the support by the hunting public and user groups for this management initiative.

A major change for 1989 will be the closure of the East Fundy Moose Management Zone (Albert County) for a 3 to 5 year period. Biological information indicate that the moose population in this Zone has declined dramatically during the past 10 years. At the same time, the female component of the herd has been heavily harvested which has likely contributed to the decline. Moose harvest in this Zone was approximately 17 animals in 1988. This Zone will be censused periodically beginning in the winter of 1989-90 to monitor the impact of the closure. The New Brunswick Wildlife Federation and residents of the Albert County region have indicated their support for the initiative.

Other changes for the 1989 season will be an increase in moose license fees from $25.00 to $50.00. This is expected to generate additional revenues of approximately $130,000. Residents who are 65 years of age and older will be eligible to apply for a moose license each year, rather than having a 5-year waiting period.

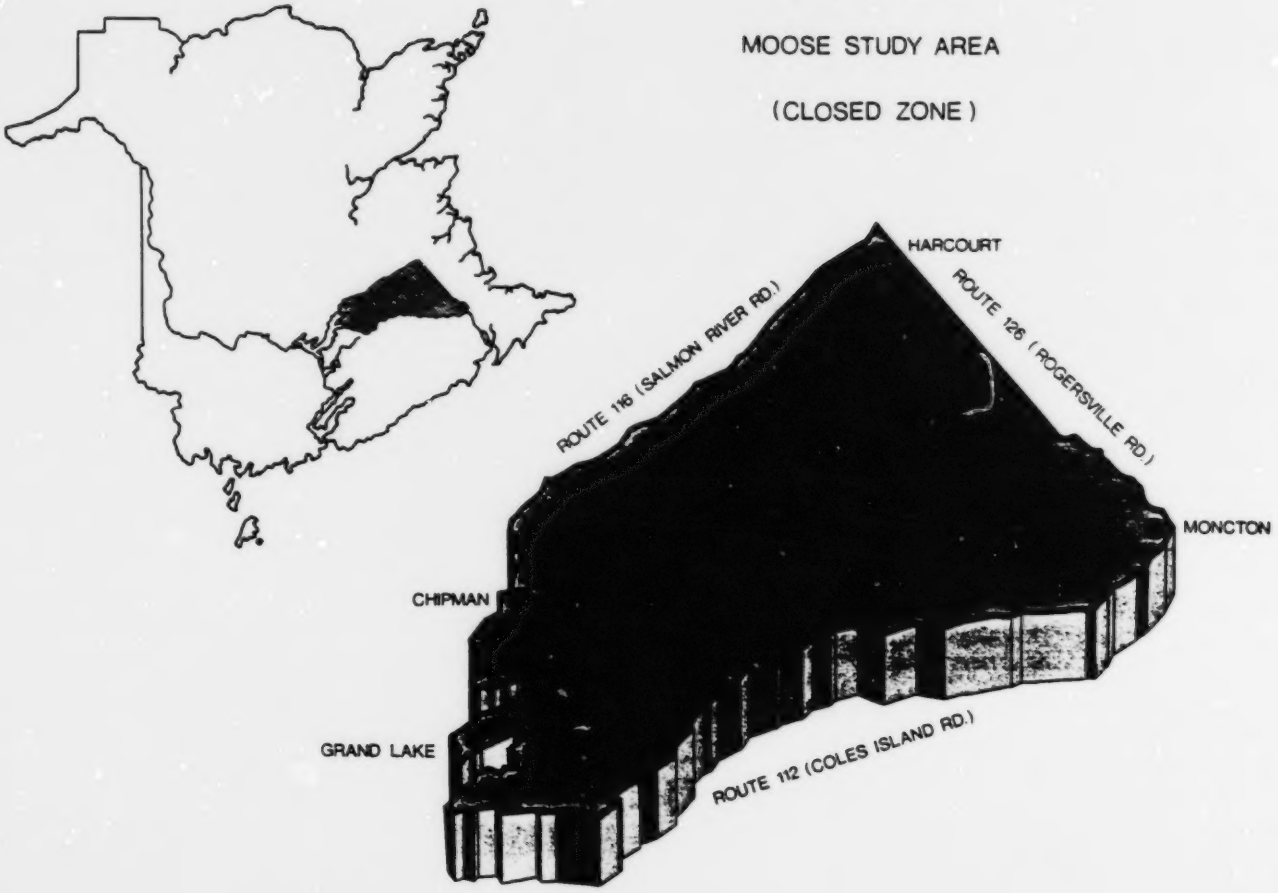
The Department is exploring ways to fund a Province-wide moose censusing program, so that all moose range is censused at least once every 3 years. In addition, we are examining the concept of priority-pooling for moose applications and computerizing the draw system. Funding of future moose management initiatives may require the introduction of a moose hunter application fee.

Sincere thanks are extended to all field staff who contributed to the moose data collection program and who helped register moose during the 1988 season. Special thanks to the enforcement staff who assisted with the Lakestream Moose Study Area.

LAKE STREAM

MOOSE STUDY AREA

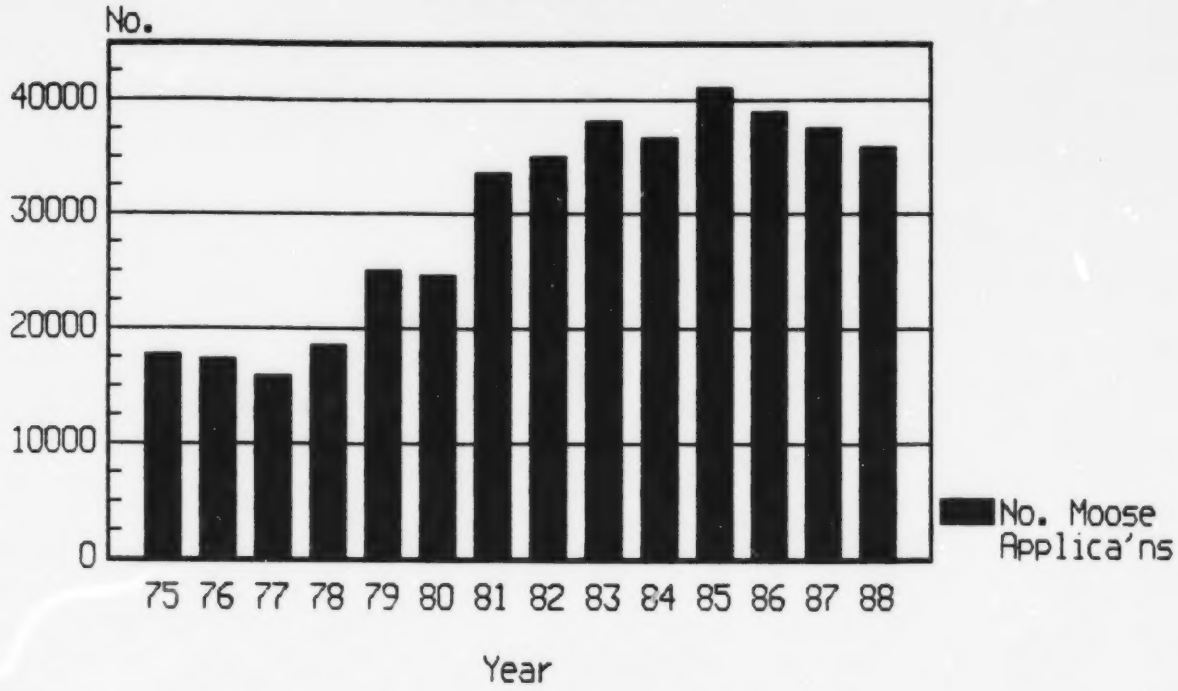
(CLOSED ZONE)



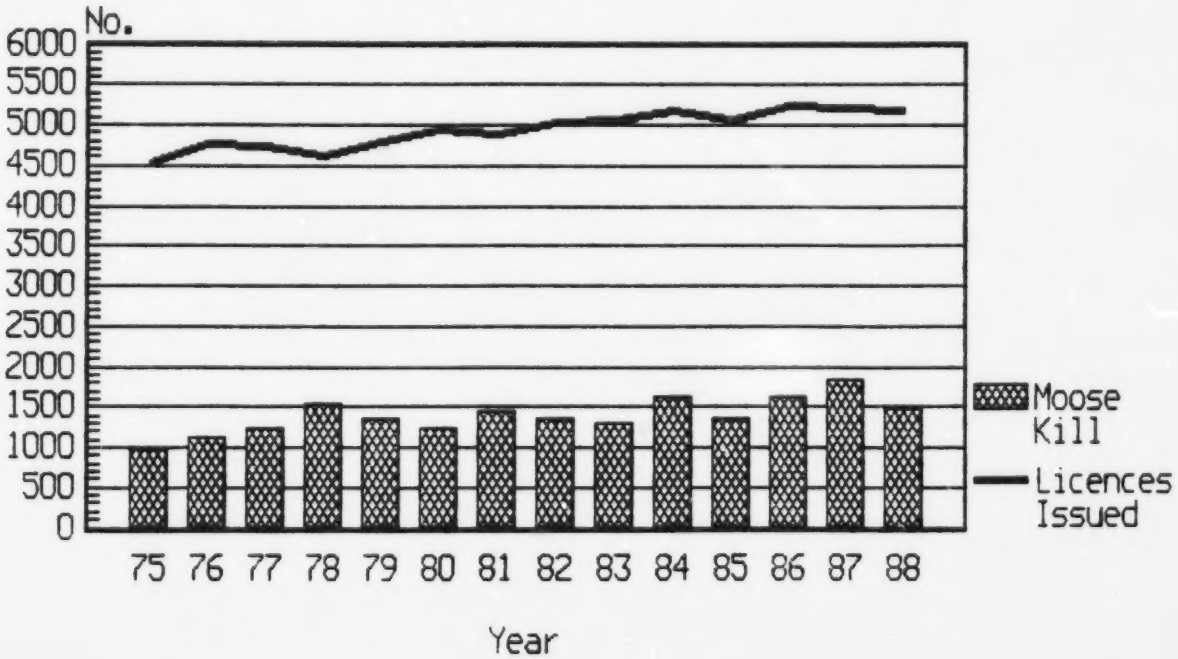
NUMBER OF MOOSE APPLICATIONS, LICENCES ISSUED, AND HARVEST
NEW BRUNSWICK, 1960-1988

Year	No. of Applications Submitted	No. of Applications Selected	No. of Licences Issued	No. of Moose Harvested
1960	8,321	400	383	174
1961	17,221	800	771	262
1962	16,354	1,000	963	297
1963	16,359	1,000	1,000	296
1964	17,380	1,000	1,000	307
1965	18,460	1,000	1,000	314
1966	26,500	1,000	1,000	606
1967	16,500	1,000	1,000	469
1968	12,724	1,500	1,500	724
1969	16,009	1,600	1,566	707
1970	14,016	2,000	1,959	858
1971	18,334	2,000	1,959	931
1972	21,639	2,500	2,441	1,043
1973	31,558	2,500	2,460	1,127
1974	39,157	6,000	5,580	1,085
1975	17,587	6,000	4,528	969
1976	17,347	6,000	4,753	1,131
1977	15,815	6,000	4,746	1,246
1978	18,547	6,000	4,604	1,547
1979	25,007	6,000	4,786	1,360
1980	24,503	6,000	4,935	1,230
1981	33,500	6,000	4,892	1,436
1982	35,000	6,000	5,032	1,344
1983	38,302	6,000	5,065	1,287
1984	36,727	6,000	5,175	1,618
1985	41,104	6,000	5,063	1,346
1986	39,127	6,000	5,228	1,625
1987	37,625	6,000	5,210	1,838
1988	35,890	6,000	5,185	1,473

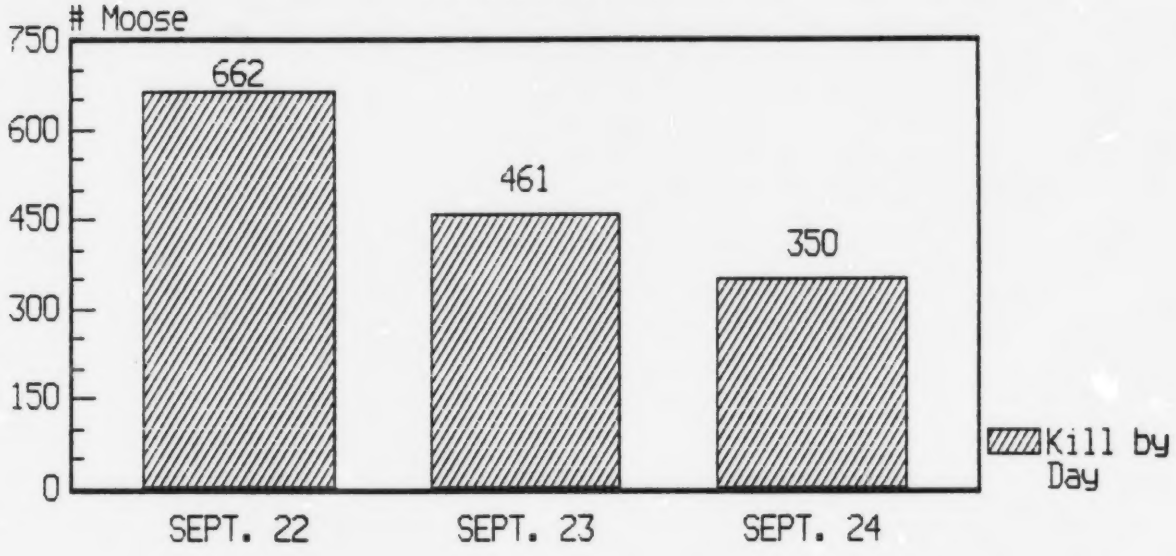
MOOSE APPLICATIONS
1975 - 88
New Brunswick



MOOSE LICENCES ISSUED
AND KILL
1975 - 88
New Brunswick



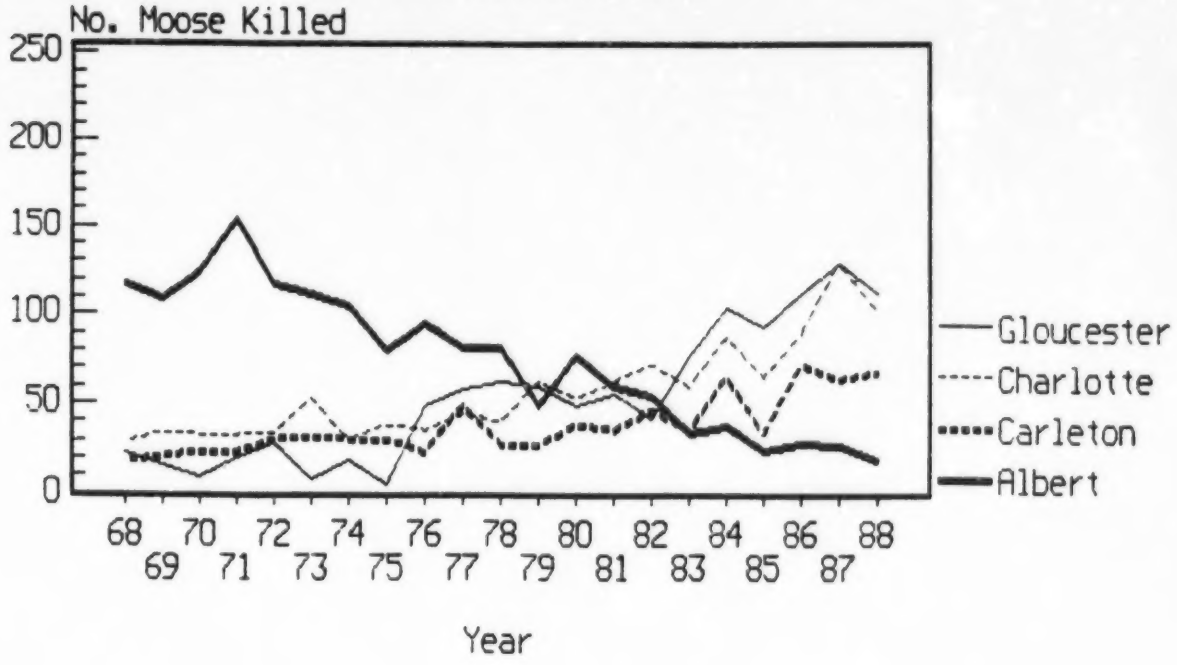
Distribution of Moose Kill
for each Day of Season
1988
New Brunswick



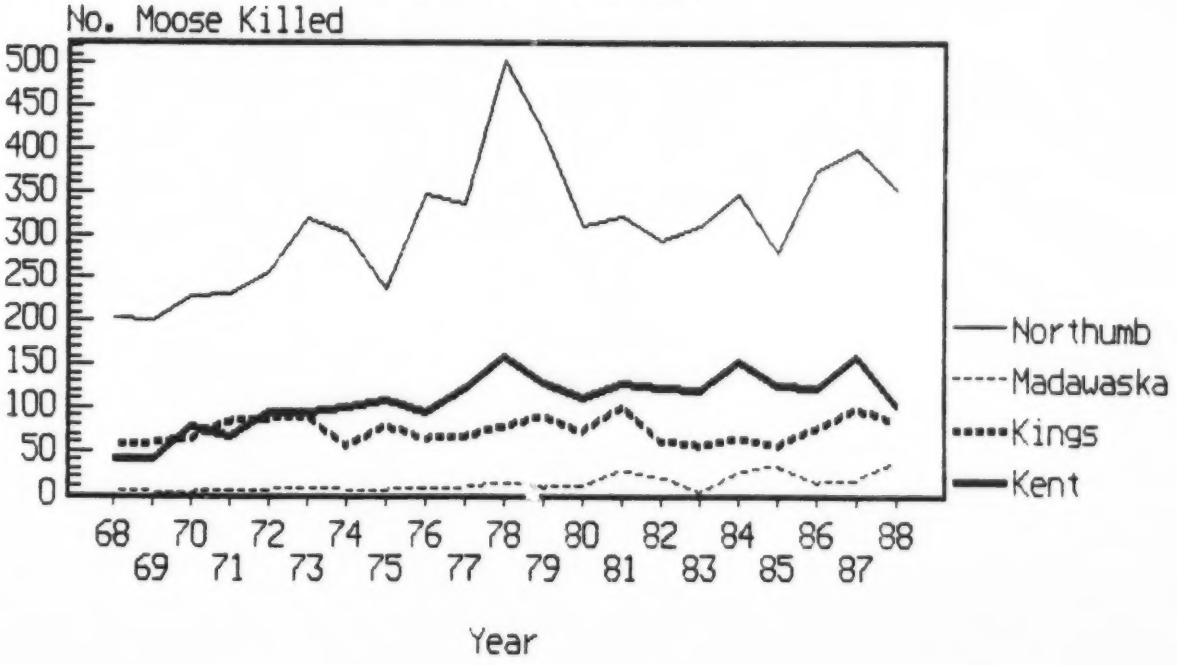
[Total Kill = 1473]

LOCATION OF COUNTIES IN NEW BRUNSWICK

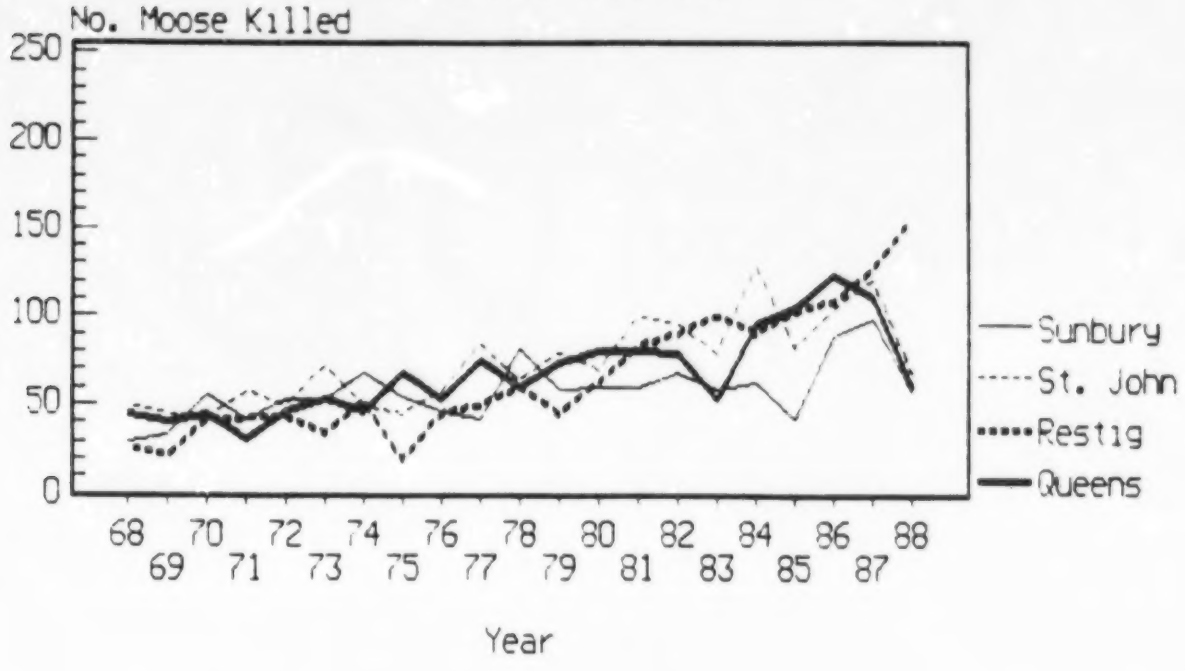
MOOSE HARVEST TRENDS FOR:
ALBERT, CARLETON, CHARLOTTE
AND GLOUCESTER COUNTIES
New Brunswick 1968-1988



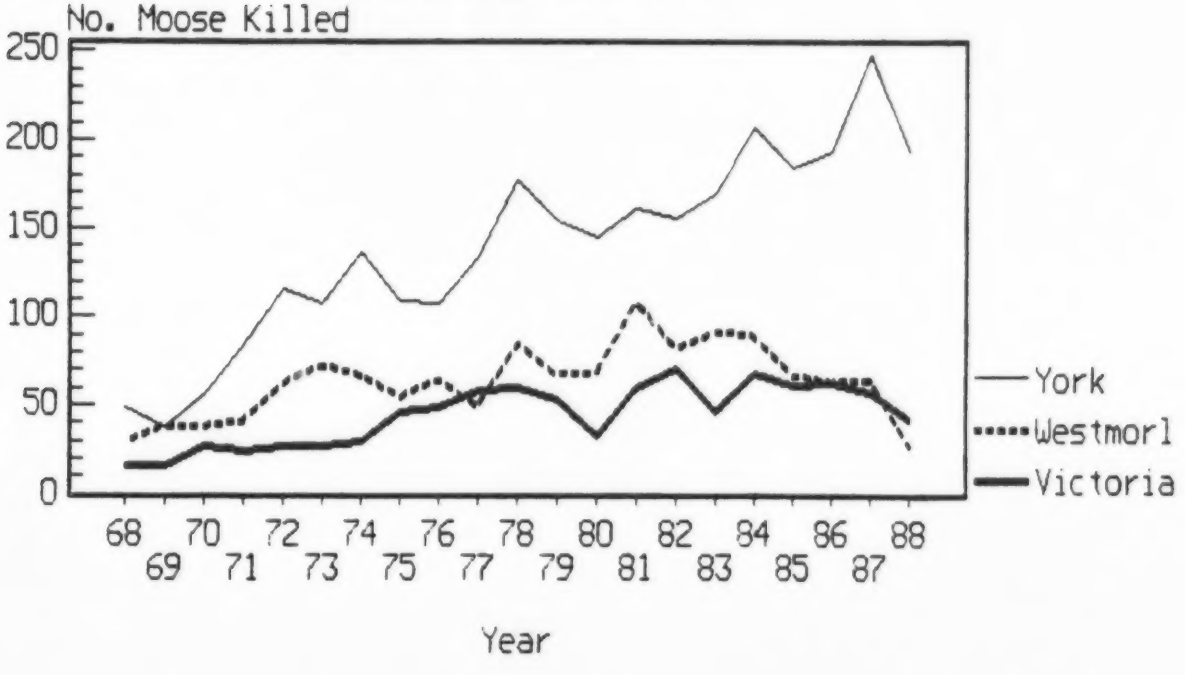
MOOSE HARVEST TRENDS FOR:
KENT, KINGS, MADAWASKA
AND NORTHUMBERLAND COUNTIES
New Brunswick 1968-1988



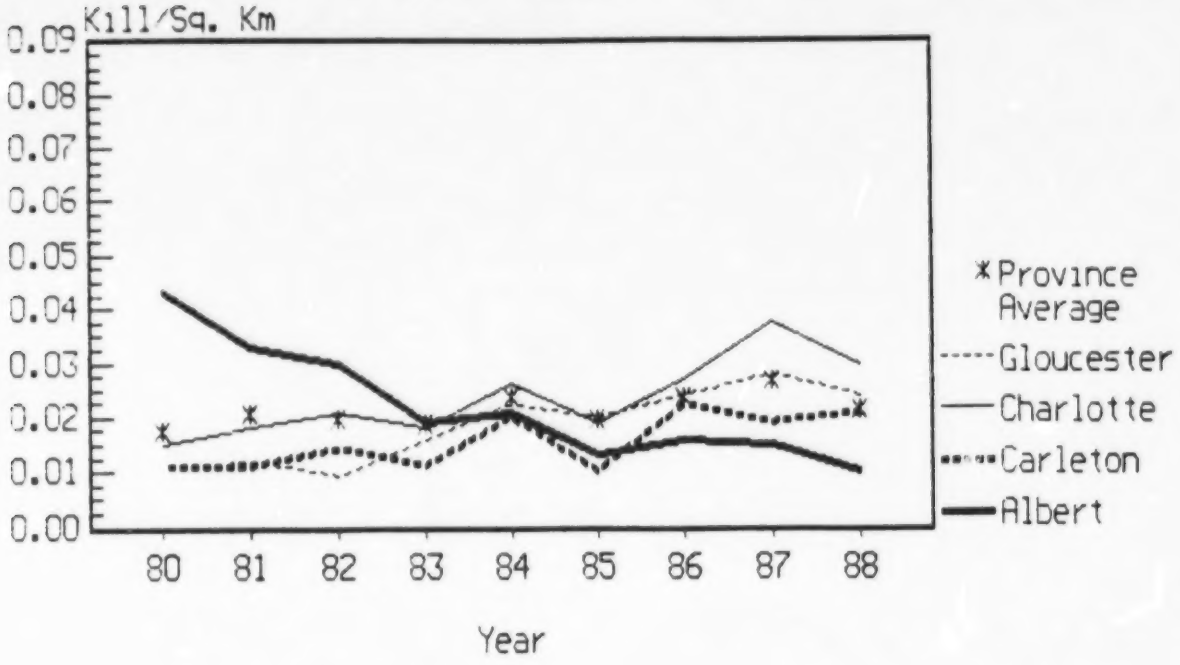
MOOSE HARVEST TRENDS FOR
QUEENS, RESTIGOUCHE, ST. JOHN
AND SUNBURY COUNTIES
New Brunswick, 1968-1988



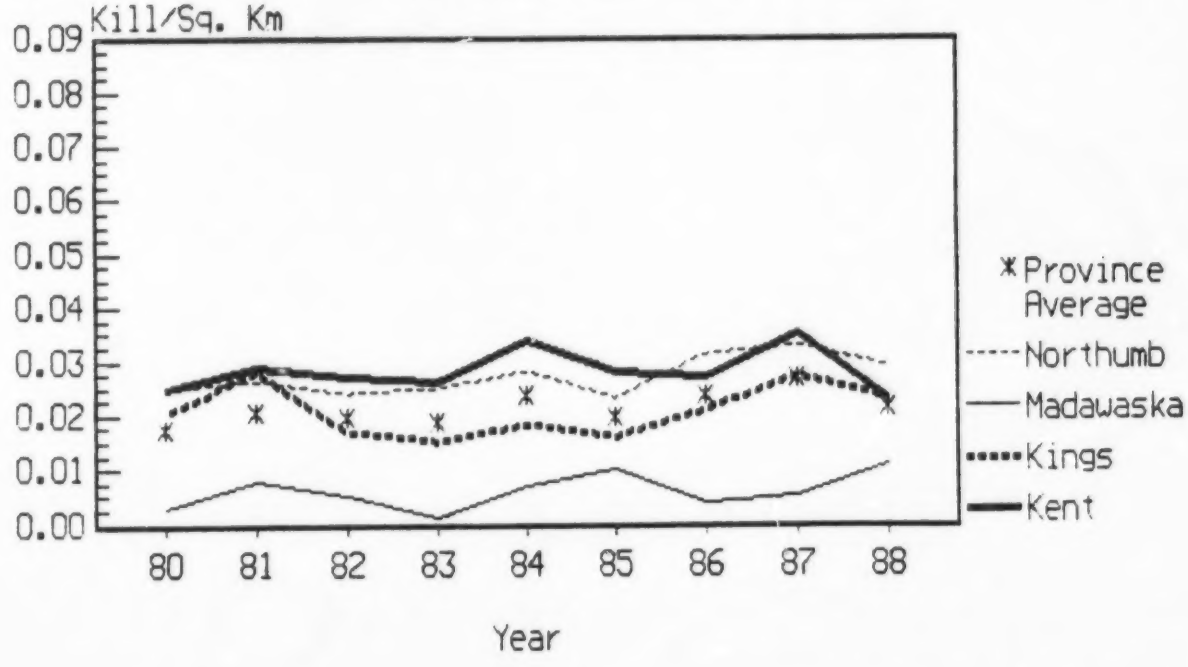
MOOSE HARVEST TRENDS FOR
VICTORIA, WESTMORLAND
AND YORK COUNTIES
New Brunswick 1968-1988



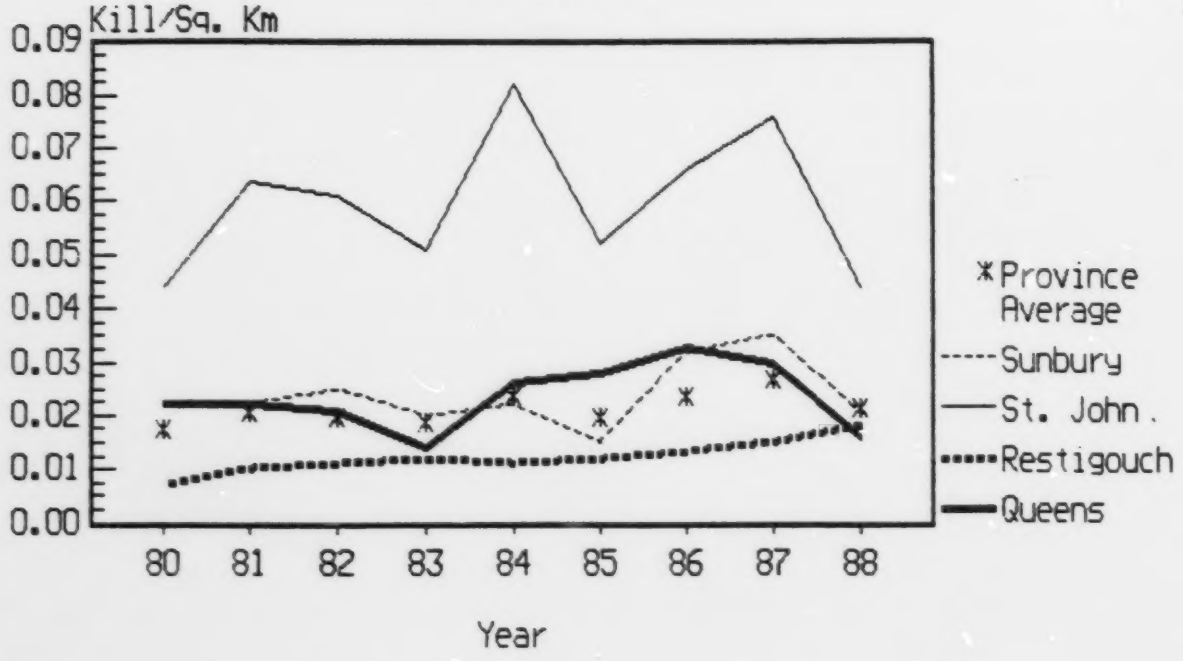
MOOSE KILL PER SQUARE KM
1980-88
Albert, Carleton, Charlotte, Gloucester
New Brunswick



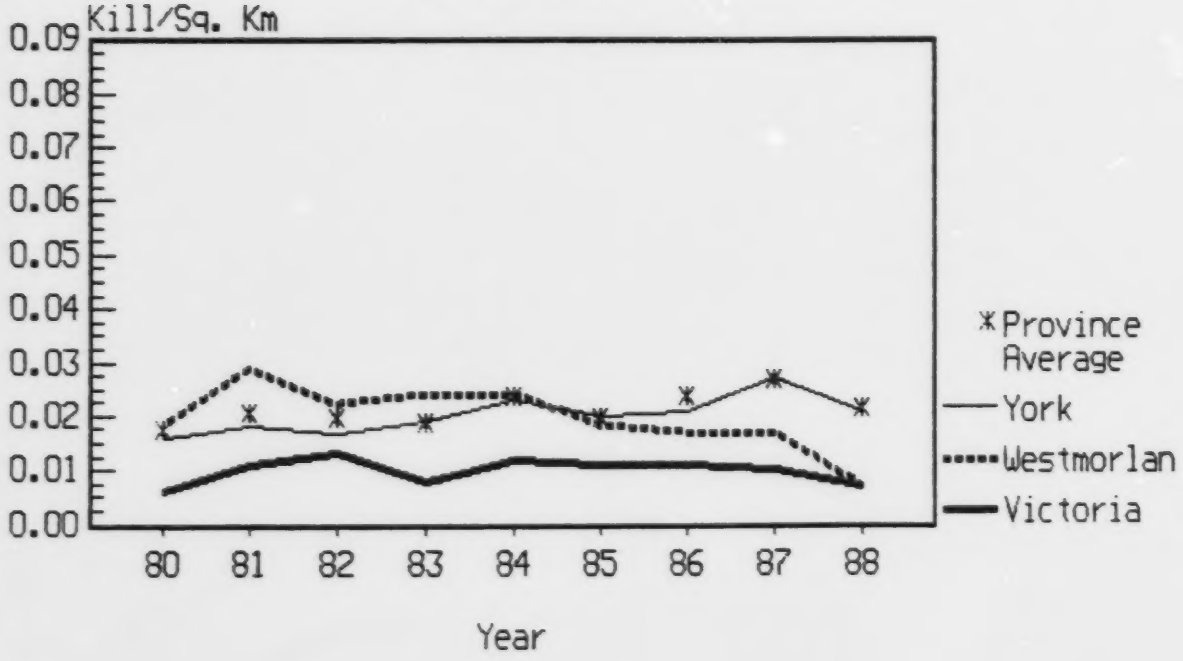
MOOSE KILL PER SQUARE KM
1980-88
Kent, Kings, Madawaska, Northumberland
New Brunswick



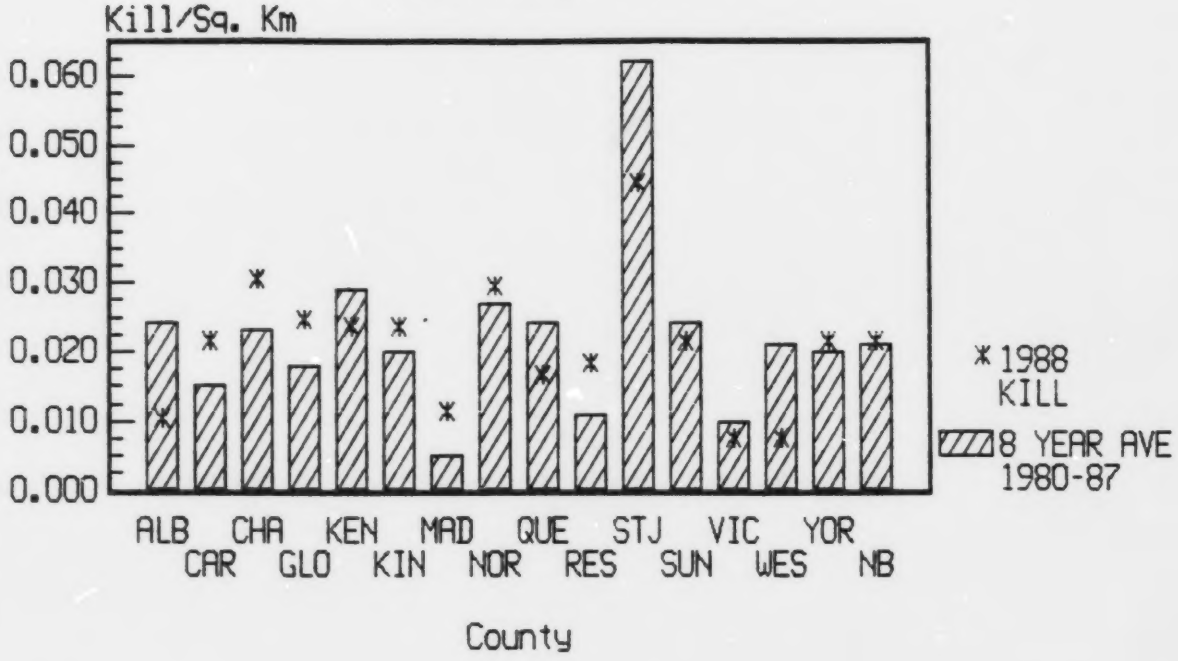
MOOSE KILL PER SQUARE KM
1980-88
Queens, Restigouche, St. John, Sunbury
New Brunswick



MOOSE KILL PER SQUARE KM
1980-88
Victoria, Westmorland, York
New Brunswick



MOOSE HARVESTS PER SQUARE KM
ALL COUNTIES
8 Year Average [1980-87] and 1988 Kill
New Brunswick



INDEX OF MOOSE HUNTING PRESSURE[1]
FOR COUNTIES OF NEW BRUNSWICK
1978-88

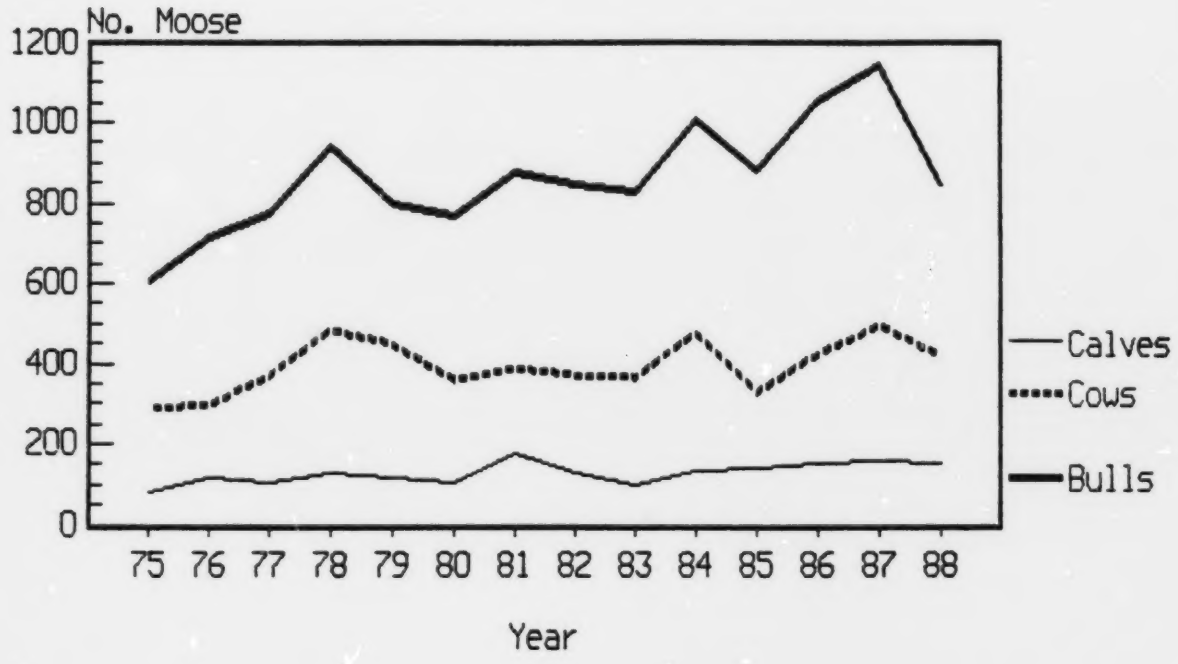
County	HOURS HUNTED/KM^2										
	78	79	80	81	82	83	84	85	86	87	88
Albert	0.6	0.4	0.5	0.4	0.4	0.2	0.3	0.2	0.2	0.2	0.2
Carleton	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3
Charlotte	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.5	0.4
Gloucester	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.3
Kent	0.4	0.3	0.2	0.3	0.4	0.3	0.4	0.3	0.3	0.4	0.3
Kings	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.3
Madawaska	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
North'land	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
Queens	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.5	0.4	0.2
Restigouche	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
St. John	0.5	0.6	0.6	0.4	0.7	0.5	1.1	0.7	1.0	1.0	0.5
Sunbury	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.4	0.4	0.2
Victoria	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1
West'land	0.2	0.2	0.2	0.4	0.3	0.4	0.3	0.2	0.3	0.2	0.1
York	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3
AVERAGE	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.4	0.3

[1]Based on "successful" hunter reports each year.

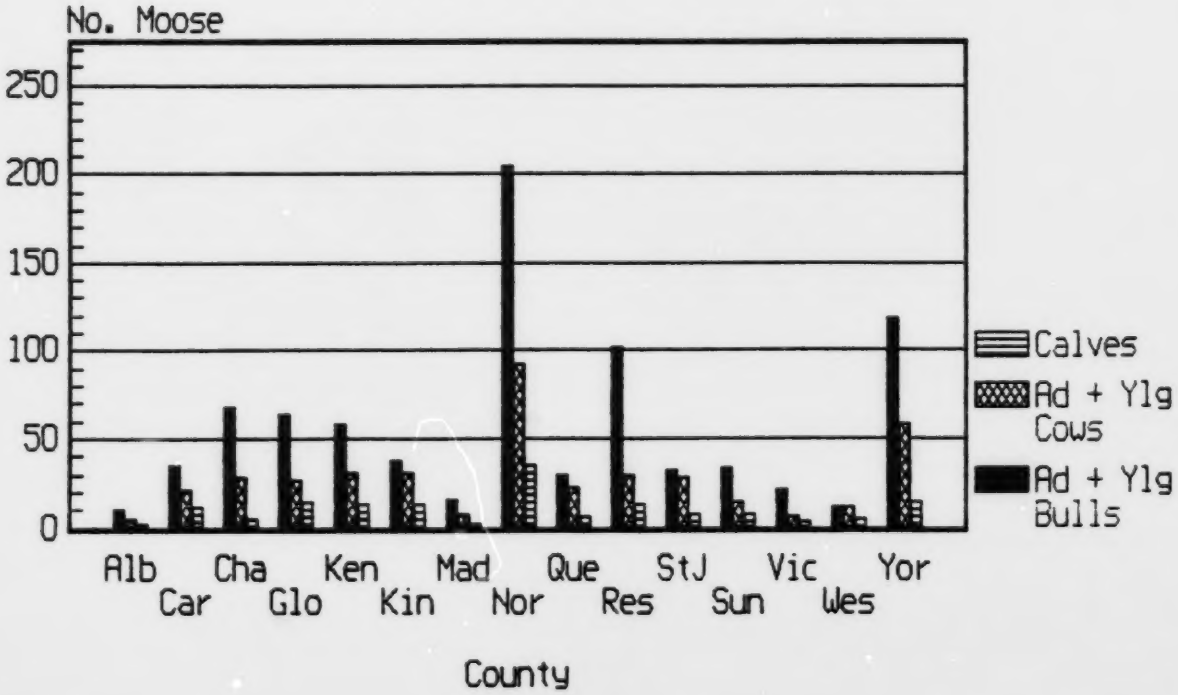
AGE AND SEX OF MOOSE HARVESTED IN NEW BRUNSWICK 1960-88

Year	Adult & Yearling		Calf		Unkn.	Total
	Bull	Cow	Male	Female		
Moose season was closed in 1936 and reopened in 1960.						
1960	174	0	0	0		174
1961	262	0	0	0		262
1962	297	0	0	0		297
1963	296	0	0	0		296
1964	307	0	0	0		307
1965	314	0	0	0		314
1966	Not available		-	-		606
1967	Not available		-	-		469
1968	472	192	33	27		724
1969	455	191	29	32		707
1970	547	236	24	51		858
1971	574	273	38	46		931
1972	702	261	35	45		1,043
1973	745	296	40	46		1,127
1974	680	284	57	64		1,085
1975	607	284	25	53		969
1976	716	298	53	64		1,131
1977	773	370	46	57		1,246
1978	936	480	58	71		1,547
1979	800	444	50	66		1,360
1980	770	357	49	54		1,230
1981	874	388	63	111		1,436
1982	844	370	60	70		1,344
1983	826	360	45	56		1,287
1984	1,008	475	56	79		1,618
1985	880	328	85	53		1,346
1986	1,055	418	71	81		1,625
1987	1,181	497	72	88		1,838
1988	843	413	77	75	65	1,473

MOOSE HARVEST - AGE / SEX STRUCTURE
New Brunswick 1975-1988



MOOSE HARVEST - AGE / SEX BY COUNTY
New Brunswick, 1988



AGE AND SEX OF MOOSE HARVESTED BY COUNTY
NEW BRUNSWICK 1988

	MALE				FEMALE				
COUNTY	Adult	Yearling	Calf	Unk.	Adult	Yearling	Calf	Unk.	TOTAL
Albert	8	2	1	1	3	2	1	0	18
Carleton	20	15	6	0	14	7	6	0	68
Charlotte	47	21	2	0	19	9	3	0	101
Gloucester	35	29	11	8	14	12	3	1	113
Kent	38	20	8	0	25	6	5	0	102
Kings	26	12	9	0	21	10	4	0	82
Madawaska	11	5	1	7	7	1	1	4	37
Northumberland	143	62	14	19	67	26	21	1	353
Queen	22	8	3	0	13	10	3	0	59
Restigouche	68	34	4	7	18	12	9	2	154
Saint John	21	11	6	0	24	4	2	0	68
Sunbury	24	10	2	2	10	4	5	0	57
Victoria	13	8	0	10	3	3	3	1	41
Westmorland	10	1	3	0	6	5	2	0	27
York	77	42	7	2	42	16	7	0	193
PROVINCE	563	280	77	56	286	127	75	9	1,473

DRESSED WEIGHTS (KG & LBS) OF MOOSE

IN NEW BRUNSWICK 1986 - 1988

	MALE				FEMALE			
Age	X Wt. (Kg)	S.D.	Range	N	X Wt. (Kg)	S.D.	Range	N
0.5	113	15	91-136	7	100	19	72-127	13
1.5	202	27	141-255	46	179	35	105-234	40
2.5	283	53	191-393	73	227	39	166-300	23
3.5	332	24	191-397	37	249	36	186-309	23
4.5	338	33	291-400	15	242	18	223-273	5
5.5	311	37	273-364	5	249	11	241-257	2
6.5	310	77	255-364	2	-	-	-	-
7.5	-	-	-	-	-	-	-	-
8.5+	340	34	316-364	2	-	-	-	-

	MALE				FEMALE			
Age	X Wt. (Lb)	S.D.	Range	N	X Wt. (Lb)	S.D.	Range	N
0.5	249	33	200-300	7	220	41	158-280	13
1.5	445	60	310-560	46	394	77	230-515	40
2.5	622	121	420-865	73	501	87	365-567	23
3.5	715	118	420-873	37	547	79	410-680	23
4.5	743	72	640-880	15	533	41	490-600	5
5.5	683	80	600-800	5	547	25	530-565	2
6.5	680	170	560-800	2	-	-	-	-
7.5	-	-	-	-	-	-	-	-
8.5+	747	74	695-800	2	-	-	-	-

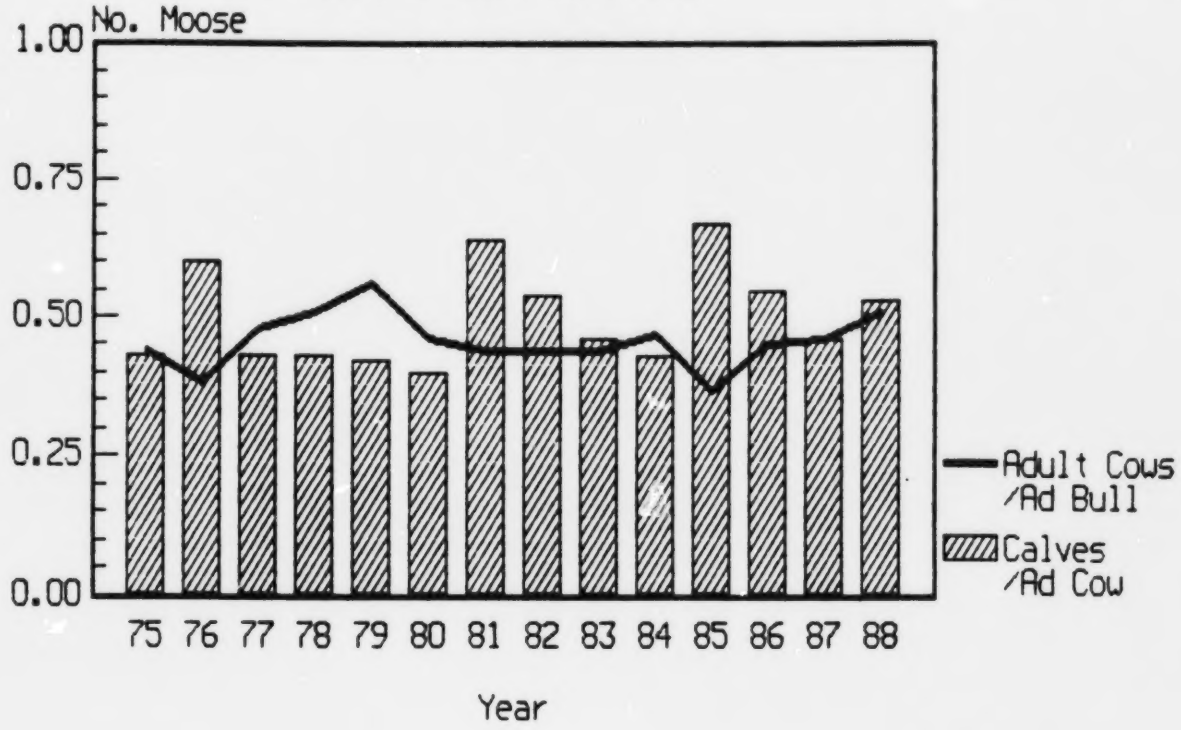
*** Weights were collected from moose registered at the York Street Ranger Office, Fredericton, 1986-88.

DISTRIBUTION OF KILL BY AGE CLASS FOR MALE AND FEMALE MOOSE IN NEW BRUNSWICK 1988

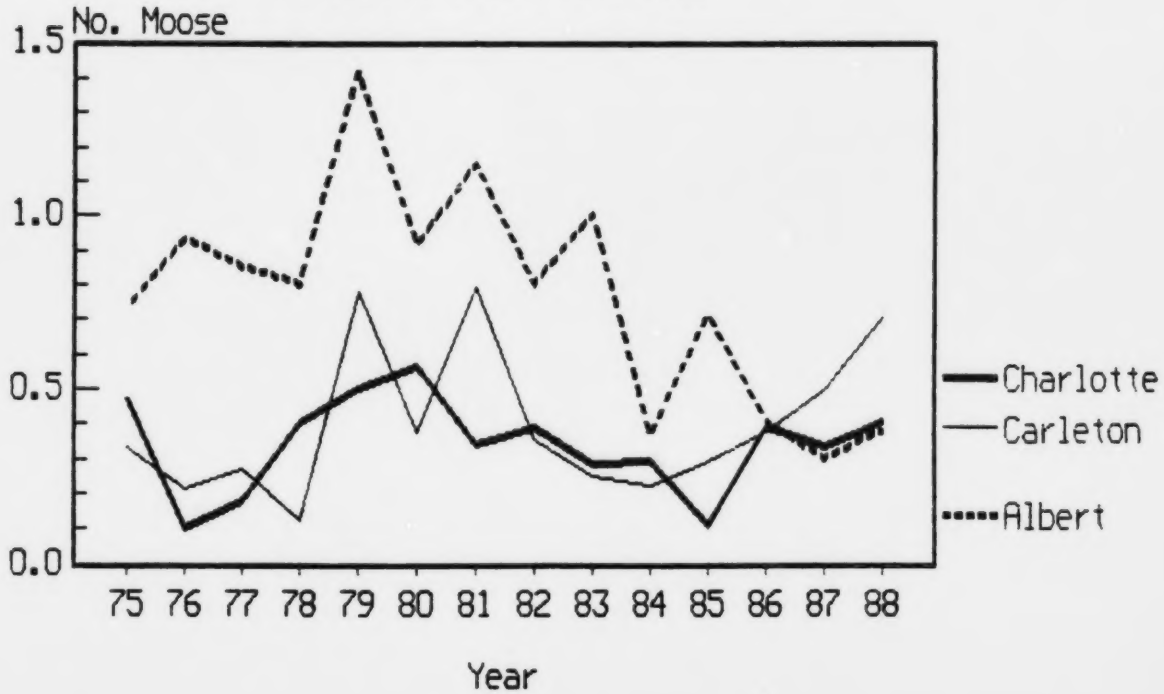
COUNTY OF KILL	AGE AND SEX CLASS																							
	0.5		1.5		2.5		3.5		4.5		5.5		6.5		7.5		8.5		9.5+		UNKNOWN		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Albert	1	1	2	2	3	2	3	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	12	6
Carleton	6	6	15	7	11	8	5	4	2	1	0	0	0	1	1	0	1	0	0	0	0	0	41	27
Charlotte	2	3	21	9	23	9	19	8	2	1	3	1	0	0	0	0	0	0	0	0	0	0	70	31
Gloucester	11	3	29	12	5	1	14	2	5	4	7	5	3	1	0	1	1	0	0	0	8	1	83	30
Kent	8	5	20	6	17	8	10	9	6	6	3	1	0	1	0	0	1	0	1	0	0	0	66	36
Kings	9	4	12	10	6	7	12	5	4	4	2	2	1	0	0	3	1	0	0	0	0	0	47	35
Madawaska	1	1	5	1	5	3	2	2	3	1	1	1	0	0	0	0	0	0	0	0	7	4	24	13
Northumb	14	21	62	26	58	21	37	27	22	12	7	2	8	1	3	3	5	1	3	0	19	1	238	115
Queens	3	3	8	10	9	3	7	6	3	2	1	0	1	2	0	0	1	0	0	0	0	0	33	26
Restigouche	4	9	34	12	12	5	29	4	13	3	9	2	3	1	1	1	1	2	0	0	7	2	113	41
Saint John	6	2	11	4	7	7	8	6	4	7	1	3	0	0	1	1	0	0	0	0	0	0	38	30
Sunbury	2	5	10	4	9	4	12	2	2	1	1	2	0	1	0	0	0	0	0	0	2	0	38	19
Victoria	0	3	8	3	8	2	1	1	3	0	0	0	1	0	0	0	0	0	0	0	10	1	31	10
Westmorland	3	2	1	5	2	3	4	2	2	1	2	0	0	0	0	0	0	0	0	0	0	0	14	13
York	7	7	42	16	41	16	22	18	9	4	2	1	2	0	0	0	0	3	1	0	2	0	128	65
TOTAL	77	75	280	127	216	99	185	9	82	47	39	20	19	9	6	9	11	6	5	0	56	9	976	497

GRAND TOTAL MOOSE HARVESTED IN NB: 1,473

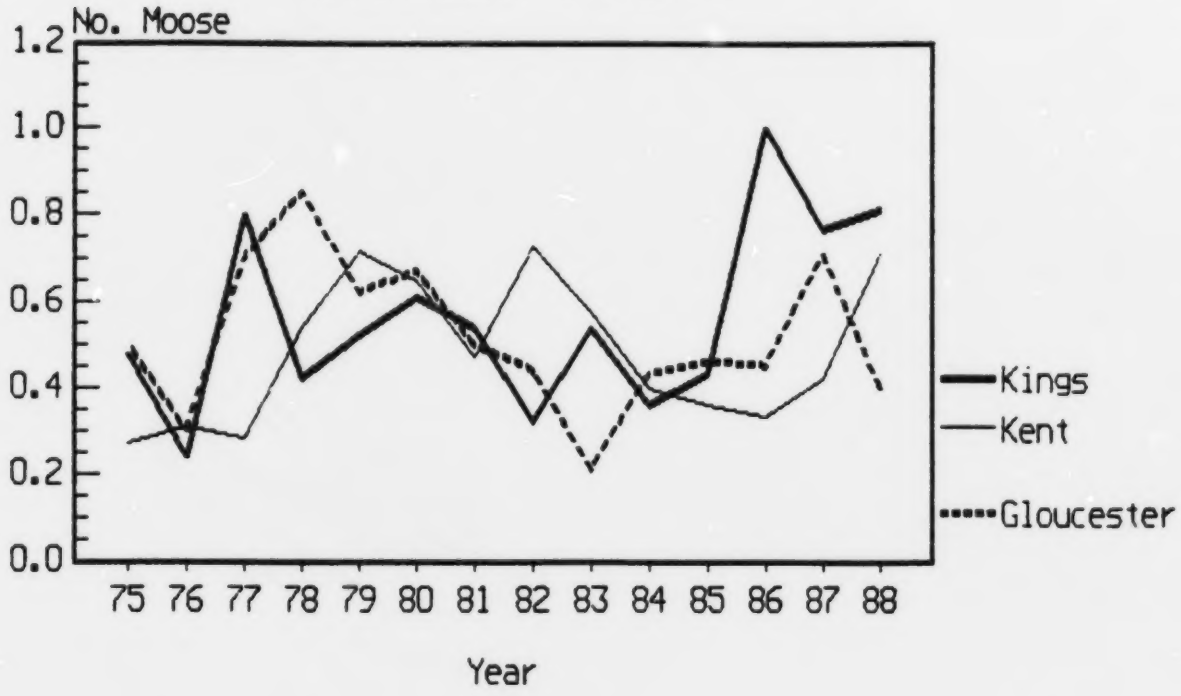
MOOSE HARVEST - PRODUCTIVITY RATIOS
New Brunswick 1975-1988



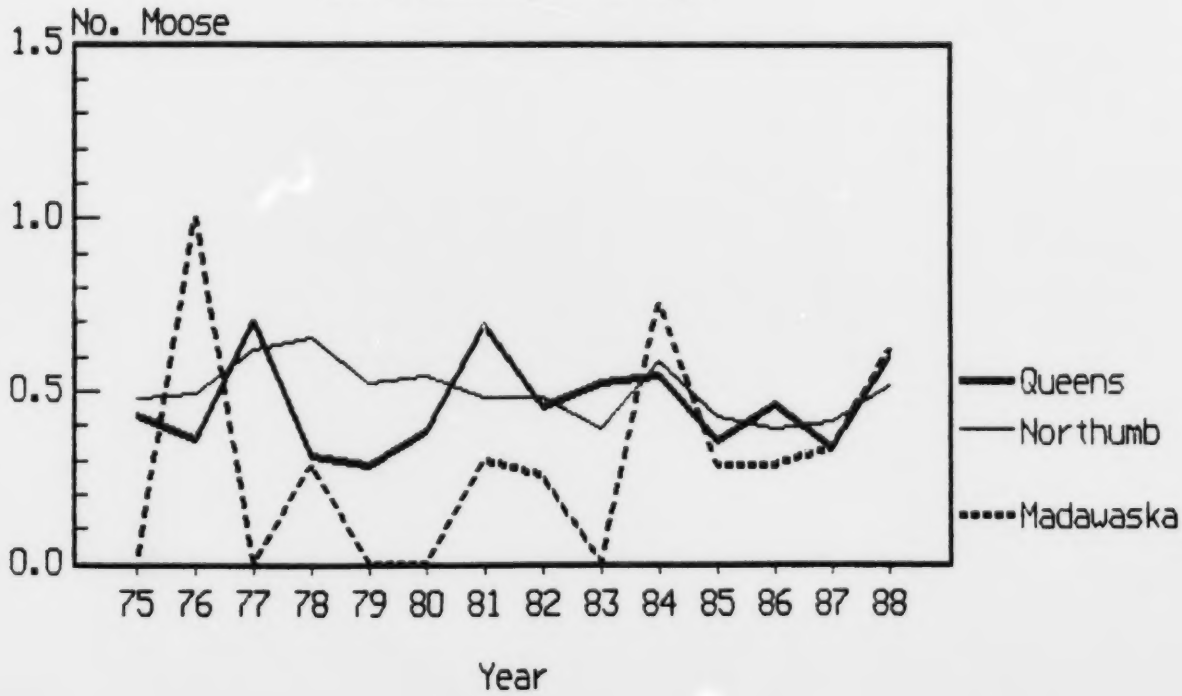
MOOSE HARVEST - AD. COW/AD. BULL RATIOS
ALBERT, CARLETON, CHARLOTTE
New Brunswick 1975-1988



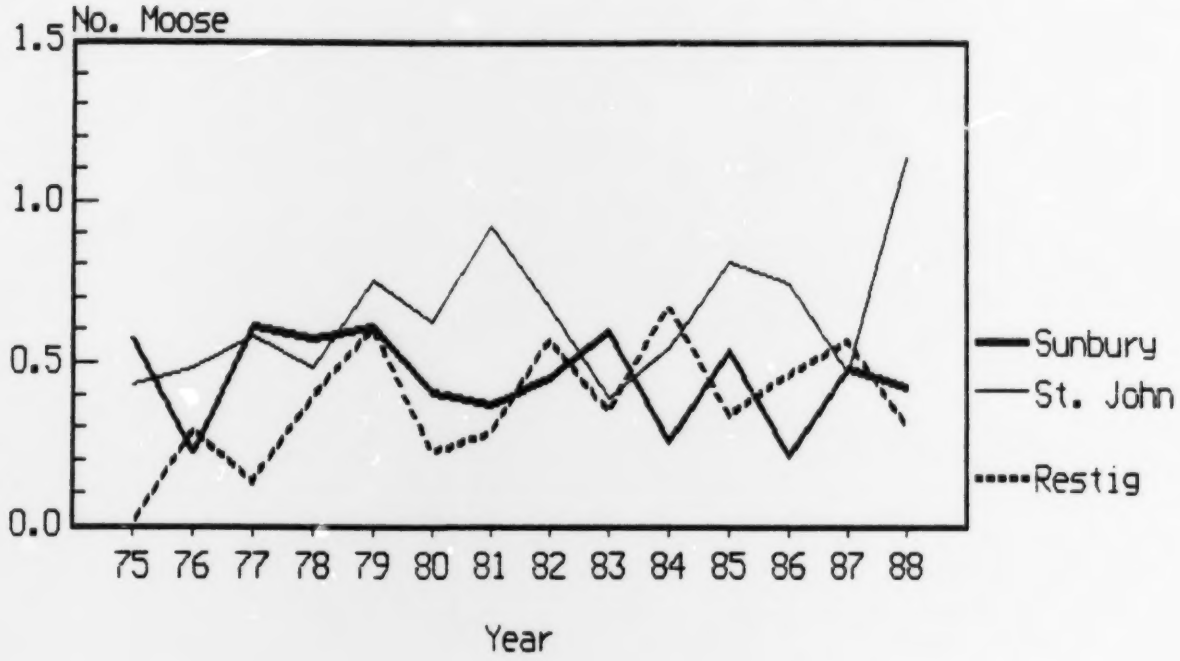
MOOSE HARVEST - AD. COW/AD. BULL RATIOS
GLOUCESTER,KENT,KINGS
New Brunswick 1975-1988



MOOSE HARVEST - AD. COW/AD. BULL RATIOS
MADAWASKA, NORTHUMBERLAND, QUEENS
New Brunswick 1975-1988



MOOSE HARVEST - AD. COW/AD. BULL RATIOS
RESTIGOUCHE, ST. JOHN, SUNBURY
New Brunswick 1975-1988



MOOSE HARVEST - AD. COW/AD. BULL RATIOS
VICTORIA, WESTMORLAND, YORK
New Brunswick 1975-1988